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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,657	11/07/2001	Hiroshi Ito	010794	8618

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EXAMINER

ROBERTSON, JEFFREY

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,657

Applicant(s)

ITO ET AL.

Examiner

Jeffrey B. Robertson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 9, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The amendment filed 6/30/03 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: applicant has replaced the word "titrated" with the word "known". The examiner was not able to locate support for this change.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yukimoto et al. (U.S. Patent No. 4,906,707) as exemplified by Takago et al. (U.S. Patent No. 4,323,488).

The Takago reference is supplied under MPEP §2131.01(II) to explain that the oxypropylene polymers of Yukimoto are linear.

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For claim 1, in column 4, lines 2-4, Yukimoto teaches a reactive silicon-group containing oxyalkylene where the silicon groups are exclusively at the molecular chain terminus. For claims 1, 3, and 4, in Synthesis Example 1, column 9, line 45 through column 10, line 7, Yukimoto teaches that the polyoxypropylene contains 1.7 silicon groups at the molecular ends as confirmed by NMR analysis. In column 2, lines 29-31, Yukimoto teaches that the examples of the polyoxyalkylene polymer are known as set forth in the Takago reference, U.S. Patent No. 4,323,488. In the Takago reference, in column 3, line 25, formula (II), Takago shows a completely linear structure for the polyether starting materials. Therefore 85% of the terminals are substituted by the silicon groups ($1.7/2.0 \times 100 = 85\%$) because there are only two terminal groups per molecule. In column 8, lines 37-45, Yukimoto teaches the addition of fillers.

For claim 2, in column 3, lines 3-30, Yukimoto teaches the silicon group set forth by applicant, where there must be at least one hydrolyzable group.

For claim 5, in column 4, lines 10-26, Yukimoto teaches that a polyether having an end group corresponding to applicant's general formula (2) is reacted with a hydrosilyl group in the presence of a platinum catalyst. Note that in Yukimoto's formula (III), R^3 is a monovalent organic group having 1-20 atoms.

For claim 10, in column 4, lines 5-9, Yukimoto teaches that the number average molecular weight is preferred to be between 5,000-15,000, which overlaps the range claimed by applicant.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yukimoto et al. (U.S. Patent No. 4,906,707) as exemplified by Takago et al. (U.S. Patent No. 4,323,488 as applied to claim 1 above and further in view of Higuchi et al. (U.S. Patent No. 5,223,583)).

For claim 1, Yukimoto teaches the limitations of those claims as set forth above in paragraph 7. Yukimoto does not expressly teach situations where R^3 is CH_3 or R^4 is methylene. However, Yukimoto does teach that R^3 can be organic groups of 1-20 carbon atoms and R^4 is a divalent group of 1-20 atoms in column 4, lines 20-24. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a methyl group for R^3 and a methylene group for R^4 . The motivation would have been that Yukimoto expressly provides for these groups as set forth above. One of ordinary skill in the art would have used the methyl and methylene groups because they provide the smallest amount of substitution to fulfill the definitions set forth by Yukimoto.

For claim 6, Yukimoto also does not expressly teach the use of platinum-olefin complexes as catalysts.

Higuchi teaches the preparation of silylated polyethers in column 4, lines 29-51. Here Higuchi teaches the use of transition metal catalysts for the hydrosilylation reaction and lists platinum olefin complexes as suitable catalysts.

Higuchi and Yukimoto are analogous art in that they are from the same field of endeavor, namely the preparation of silyl-terminated polyoxyalkylenes by hydrosilylation reactions. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the platinum-olefin complexes as the catalysts of the hydrosilylation between the unsaturated polyoxyalkylenes and the hydrosilyl groups. It is *prima facie* obvious to substitute equivalents, motivated by a reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. *In re Ruff* 118 USPQ 343, *In re Jezel* 158 USPQ 99; the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious. *In re Font*, 213 USPQ 532.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yukimoto et al. (U.S. Patent No. 4,906,707) as exemplified by Takago et al. (U.S. Patent No. 4,323,488) as applied to claim 1 above, and further in view of Hattori et al. (EP 0 856 569).

For claim 1, Yukimoto teaches the limitations of claim 1 as detailed above. In column 1, lines 19-25, Yukimoto teaches that the oxyalkylenes having silyl groups are useful as sealants. Yukimoto fails to teach a direct glazing method using the compositions set forth in the patent.

Hattori, on page 2, line 45 through page 3, line 39, teaches a direct glazing method using silyl terminated oxyalkylenes.

Yukimoto and Hattori are analogous art because they are both directed to silyl terminated oxyalkylenes and their use. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the polymers Yukimoto in the direct-glazing method set forth by Hattori. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Allowable Subject Matter

7. Claims 9 12, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. For claim 9, Yukimoto does not teach a substituted alkenyl group as set forth in claim 9. For claims 12 and 13, Yukimoto does not teach introduction rates of above 85%.

Response to Arguments

8. Applicant's arguments filed 6/30/03 have been fully considered but they are not persuasive. First applicant argues that Yukimoto does not teach a polyoxypropylene where the R³ substituent is a hydrocarbon group. The examiner disagrees. Yukimoto teaches in column 4, lines 10-20, that the end groups on the polyoxypropylene polymer

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of general formula (III) contain a substituent R^3 (corresponding to applicant's R^3) that is a monovalent organic group of 1-20 carbon atoms. This is a teaching that R^3 is a hydrocarbon group.

Next, applicant argues that it is a "special case" where the number of terminals amounts to 2.0. That is, only when the polymer is completely linear will the amount of terminal groups equal 2.0. Applicant argues that it is possible for there to be a branched chain in the molecule. In response, the examiner disagrees. First, Yukimoto does not disclose that the polymer chain is branched. Applicant states that it is "possible" that there is at least one branched chain in the molecule. However, there is no such teaching in the reference. In addition, the examiner objects to the use of the term "special case" to describe situations where the polymer is completely linear. There are many examples of polymers that are completely linear in the literature. Specifically, as set forth above, the examiner has modified the rejection under 35 U.S.C. §102 using the Yukimoto reference, to include the Takago reference, which shows that the polyether polymers are completely linear. Yukimoto expressly cites Takago as previously prepared polyether polymers. In addition, Yukimoto teaches in column 6, lines 55-58, that the polyether polymers (B) can be used as raw materials for the polyether (A) polymers. Note that in column 10, lines 21-34, Yukimoto discloses the (B) polymers and specifically states that both ends contain allyloxy groups. This means that there are only two ends of the polymer, i.e. a completely linear polymer.

Regarding the rejections made under 35 U.S.C. §103, applicant argues that the polymers of Yukimoto do not teach an introduction ratio of 85%. The examiner

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disagrees as set forth above. In addition applicant argues that the effects of the invention, in terms of various properties are not taught by Yukimoto. However, the claims do not set forth any of the properties argued by applicant. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The rejection made under 35 U.S.C. §112 2nd paragraph is withdrawn based on applicant's amendments to the claims. The art rejections made over the Yukimoto ('700) patent, Kimura ('383), Fujita ('427), Yamamoto (JP 06-279693), Watabe (JP 05-125273), and Yanase (JP-05-222284) are withdrawn in light of applicant's amendments to the claims.

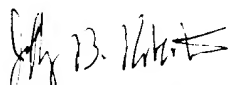
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (703) 306-5929. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on (703) 308-2340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Jeffrey B. Robertson
Primary Examiner
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JBR